

# R0E53033ACFG90

Converter Board for Connecting R8C/33A Group 32-pin 0.8mm pitch LQFP

## User's Manual

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### CAUTION

If the requirements shown in the "CAUTION" sentences are ignored, the equipment may cause personal injury or damage to the products.

## 1. Outline

The R0E53033ACFG90 is a converter board for connecting the signals of the MCU unit R0E521300MCU00 for R8C/Tiny Series to a foot pattern for 32-pin 0.8mm pitch LQFP of R8C/33A group.

## 2. Package Components (See Figure 1)

Check to see if the R0E53033ACFG90 package has all the following contents before using this product.

- (1) R0E53033ACFG90 converter board ..... 1 pc.
- (2) YQPACK032SA (made by Tokyo Eletech Corporation)..... 1 pc.
- (3) NQPACK032SA (made by Tokyo Eletech Corporation) ..... 1 pc.
- (4) YQ-GUIDE (made by Tokyo Eletech Corporation) ..... 4 pcs.
- (5) R0E53033ACFG90 User's Manual (this manual)

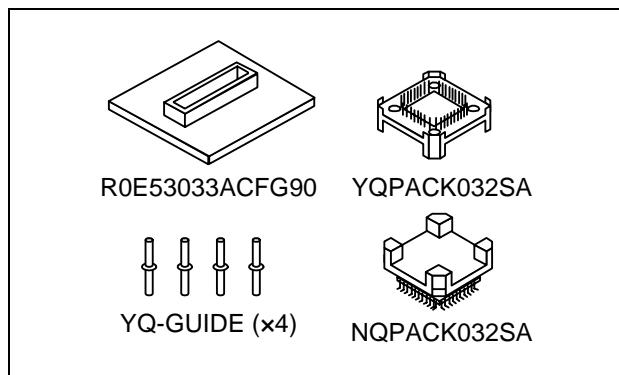


Figure 1 Package components of the R0E53033ACFG90

## 3. Specifications

Table 1 Specifications

Applicable package	PLQP0032GB-A: formerly 32P6U-A (32-pin 0.8mm pitch LQFP)
Insertion/removal iterations of connector	50 times guaranteed

## 4. Usage (See Figure 2)

The R0E53033ACFG90 can be used for debugging and on-board evaluation in common by mounting the NQPACK032SA on the user system.

### (1) For debugging

Mount the NQPACK032SA on the foot pattern of the user system and attach the YQPACK032SA on it. In addition, connect the R0E53033ACFG90 to the YQPACK032SA, and then connect the flexible cable R0E001000FLX10 of the emulator to the upper connector of the R0E53033ACFG90.

### (2) For on-board evaluation

Mount an MCU with on-chip flash memory or one-time PROM and the HQPACK032SA (not included) in order on the NQPACK032SA on the user system.

Before using the R0E53033ACFG90, be sure to read "7. Precautions" on page 4.

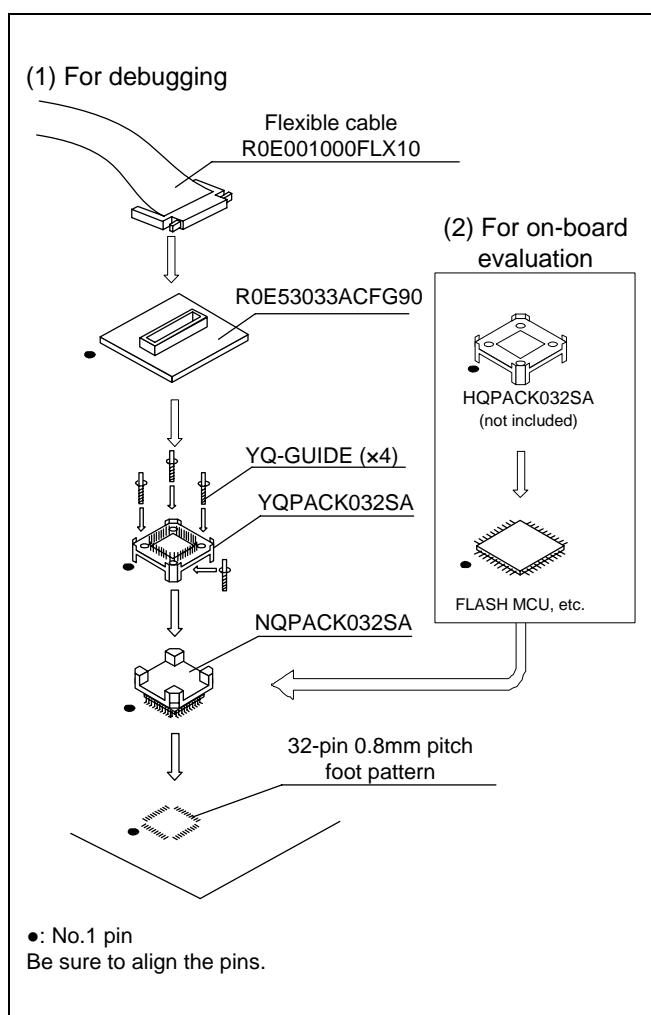


Figure 2 Usage of the R0E53033ACFG90

## 5. Connection Procedure (See Figure 3)

The procedure for connecting the R0E53033ACFG90 is shown below.

- (1) Mount the NQPACK032SA on the user system.
- (2) Attach the YQPACK032SA on the NQPACK032SA.
- (3) Secure the four corners of the YQPACK032SA with the YQ-GUIDEs.

- **Do not use the screws included with the YQPACK032SA for fixing the YQPACK032SA.**
- **Do NOT use the screwdriver included with the NQPACK032SA for fixing the YQ-GUIDEs. That is used only for the HQPACK032SA.**

- (4) Mount the R0E53033ACFG90 on the YQPACK032SA.
- (5) Connect the flexible cable R0E001000FLX10 of the emulator to the R0E53033ACFG90.

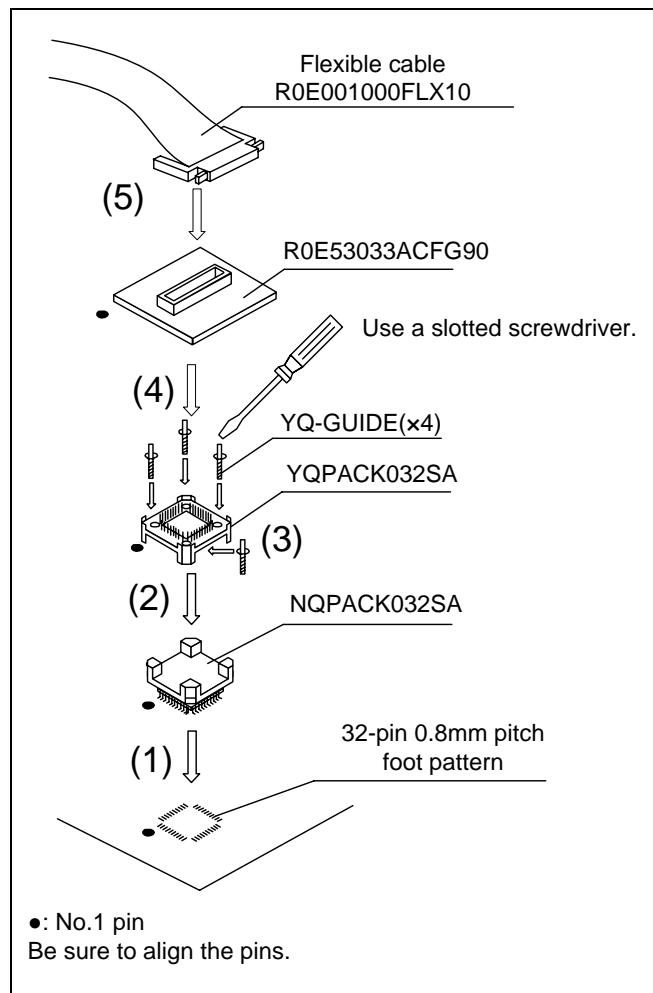


Figure 3 Connection procedure of the R0E53033ACFG90

## 6. External Dimensions and a Sample Foot Pattern

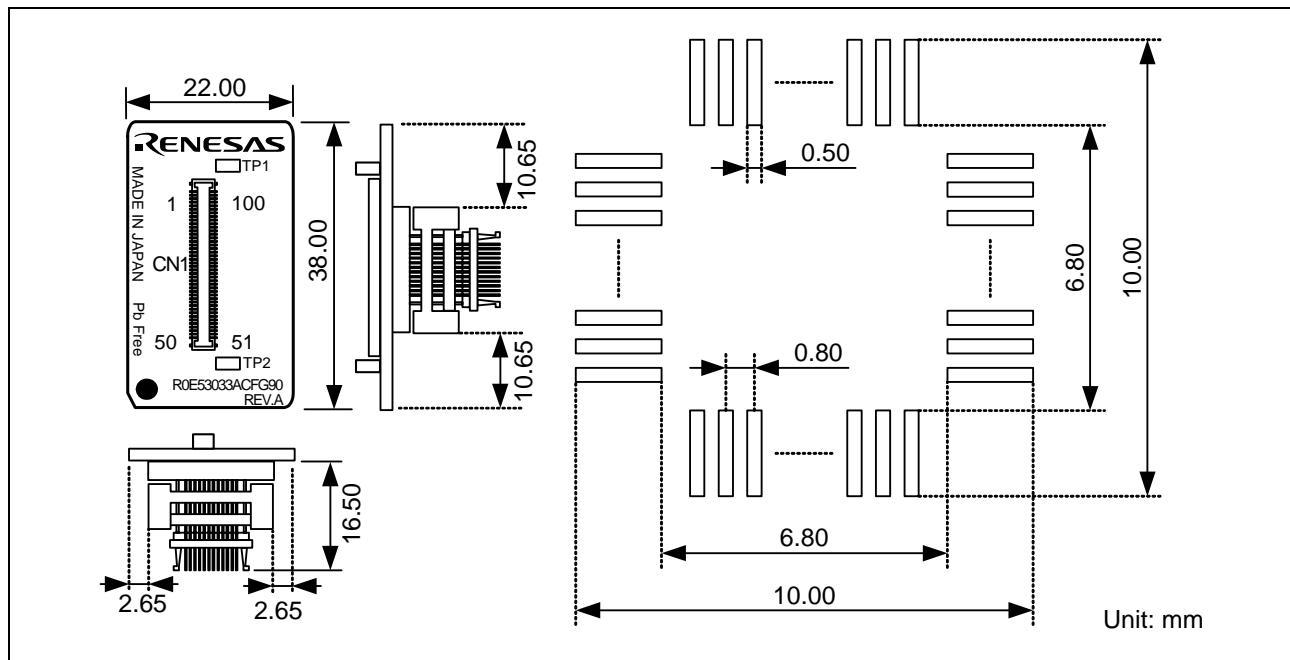


Figure 4 External dimensions and a sample foot pattern of the R0E53033ACFG90

## 7. Precautions

### ⚠ CAUTION

#### Cautions to Be Taken for This Product:



- When connecting the YQPACK032SA, be sure to use the included YQ-GUIDEs.
- Do NOT use the screws included with the YQPACK032SA for connecting the YQPACK032SA.

### IMPORTANT

#### Notes on This Product:

- We cannot accept any request for repair.
- For purchasing the NQPACK032SA, YQPACK032SA, HQPACK032SA, contact the following:  
Tokyo Eletech Corporation [http://www.tetc.co.jp/e\\_index.htm](http://www.tetc.co.jp/e_index.htm)
- For inquiries about the product or the contents of this manual, contact your local distributor.  
Renesas Tools Homepage <http://www.renesas.com/tools>

## 8. Correspondence of Connectors CN1

Table 2 Correspondence of the connectors

CN1 Pin No.	IC1	CN1 Pin No.	IC1
1	-	100	-
2	-	99	-
3	-	98	-
4	-	97	-
5	19	96	18
6	20	95	17
7	21	94	16
8	22	93	-
9	23	92	-
10	24	91	-
11	-	90	-
12	-	89	-
13	-	88	-
14	-	87	-
15	-	86	-
16	-	85	-
17	-	84	-
18	-	83	-
19	-	82	-
20	25	81	15
21	26	80	-
22	27	79	-
23	28	78	-
24	29	77	-
25	30	76	-
26	-	75	-
27	31	74	14
28	32	73	13
29	-	72	12
30	-	71	-
31	-	70	-
32	-	69	-
33	-	68	-
34	-	67	-
35	-	66	11
36	-	65	10
37	-	64	-
38	-	63	9
39	-	62	8
40	-	61	-
41	-	60	-
42	1	59	-
43	2	58	-
44	-	57	-
45	-	56	7
46	3	55	6
47	4	54	5
48	-	53	-
49	-	52	-
50	-	51	-

(-: No connection or signals in the emulator)